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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Stephen D. Scanlon
Jones, Day, Reavis & Pogue
North Point
901 Lakeside Ave.
Cleveland, OH 44114

EXAMINER

LAO, LUN YI

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,536

Applicant(s)

GRIFFIN ET AL.

Examiner

LUN-YI LAO

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44,45 and 47-103 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 44,45 and 47-103 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The finality of the rejection of the last Office action withdrawn based on the new ground rejection of a new reference WO 96/04618.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 44-45 and 47-103 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-47 of U.S. Patent No. 6,452,588 (hereinafter Pat-588) in view of Hughes et al (WO 96/04618).

By comparing the independent claim with independent claims 1, 11, 17, 23-24 and 42 of Pat-588; we can see that the claims are substantially similar. For example claim 1 of Pat-588 and claim 44 of the present application recite a hand-held device that includes a QWERTY keyboard and a display. The positive and negative angles, and the oblong shaped keys in claim 1 of Pat-588 are recited in

Art Unit: 2629

claims 56 and 57, which makes claim 1 of Pat-588 substantially similar to claim 60 of the present application, which is dependent from claims 44 and 56. None of the claims in Pat-588 recite having microphone and a speaker wherein the microphone is mounted below the display within the front surface of the device housing and the speaker is mounted above the display within the front surface of the device housing.

However, Hughes et al teach a handheld dual-mode mobile (cellular phone having voice and data communication) that includes a keyboard (14, QWERTY), speaker (402) and microphone (404) and wherein the microphone is mounted below the display (12) within the front surface of the device housing and the speaker is mounted above the display within the front surface of the device housing (figures 13-15; abstract; page 3, lines 18-37; page 4, lines 1-21; page 20, lines 3-37 and page 21, lines 1-9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to realize that the invention described in claim 1 of Patent No. 6,452,588 can be modified to include a speaker and microphone (using Hughes's teaching) to the device so that the handheld device of claim 1 of Pat-588 can be used as a portable phone and therefore, increasing the versatilities of the device. Similarly with respect the other claims of the present invention.

4. Claims 44-45 and 47-103 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 6,611,254(Griffin et al) in view of Hughes et al(WO 96/04618).

Art Unit: 2629

By comparing the independent claim with independent claims 1, 11, 17, 23-24 and 42 of Patent No. 6,611,254, they both teach a dual mode mobile (cellular phone, claim 7 and e-mail, claim 1) communication device comprising a voice communication interface (cellular phone, claim 7), a data communication interface having a display and the QWERTY keyboard (see claim 1).

None of the claims in Patent No. 6,611,254 recite having microphone and a speaker wherein the microphone is mounted below the display within the front surface of the device housing and the speaker is mounted above the display within the front surface of the device housing.

However, Hughes et al teach a handheld dual-mode mobile (cellular phone having voice and data communication) that includes a keyboard (14, QWERTY), speaker (402) and microphone (404) and wherein the microphone is mounted below the display (12) within the front surface of the device housing and the speaker is mounted above the display within the front surface of the device housing (figures 13-15; abstract; page 3, lines 18-37; page 4, lines 1-21; page 20, lines 3-37 and page 21, lines 1-9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to realize that the invention described in claim 1 of Patent No. 6,611,254 can be modified to include a speaker and microphone (using Hughes's teaching) to the device so that the handheld device of claim 1 of Patent No. 6,611,254 can be used as a portable phone and therefore, increasing the versatilities of the device. Similarly with respect the other claims of the present invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 44-45, 47-52, 56-59, 64, 68-69, 75-86 and 91-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie (US Patent N0. 6,731,227) in view of Hughes et al(WO 96/04618)

As to independent claim 44, Horie (figures 3A-3C and 6) teaches a dual mode mobile communication device (mobile phone and e-mail, see abstract and column 5, lines 1-2) that includes a single, integrated device housing (figure 6) that does not include two or more hinged housing sections, a voice communication interface configured in the device housing for operating the device in a voice mode of operation, the voice communication interface comprising a speaker and a microphone (it is inherent that the mobile phone has a speaker and microphone (col. 3, lines 26-33). Horie teaches a data communication interface configured in the device housing for operating the device in a data mode of operation, the data communication interface comprising the display QWERTY keyboard, the QWERTY keyboard being positioned within a front surface of the single, integrated device housing (col. 2, lines 60-67).

Art Unit: 2629

Horie teaches a wireless transceiver for sending and receiving voice communications when in the voice mode of operation and data communications when in the data mode of operation (it is inherent that the mobile phone has a wireless transceiver for sending and receiving voice communication) (abstract), and wherein the speaker is positioned at the top of the device housing, the display is positioned below the speaker and the QWERTY keyboard and the microphone are positioned below the display (it is inherent that the speaker is on top of the phone and the microphone on the bottom).

Horie does not expressly teach that the QWERTY keyboard, microphone, speaker and a display are integrated in a single device.

However, Hughes shows a dual mode mobile communication (cellular phone and data communication) that includes a keyboard (14, QWERTY), speaker (402) and microphone (404) and a display(12) are integrated into a single piece(see figures 13-15; abstract; page 3, lines 18-37; page 4, lines 1-21; page 20, lines 3-37 and page 21, lines 1-9). It would have been obvious to have modified Horie with the teaching of Hughes, so as to provide a mobile communication device could be easy to operate and reduce the cost of the mobile communication device.

As to claims 45 and 84 as can be seen in figures 6; the device housing has a back surface and have generally rectangular shape.

As to claim 47, as can be seen in figures 6; the mobile phone includes a plurality of side surfaces connecting the front surface to the back surface.

As to claims 48-49, as mentioned above, the speaker and the microphone are located in the normal positions on the mobile phone, which are on the front surface

Art Unit: 2629

and the bottom side surface respectively, and the microphone is positioned below the QWERTY keyboard.

As to claims 50-51, as can be seen in figures 6, the keyboard, the microphone, the speaker and the display are all aligned along a vertical reference line.

As to claim 52, the display of the device as shown in figure 6 is rectangular.

As to claim 56, figure 6 of Horie reference fairly reads on the claimed limitations of claim 56.

As to claims 57-59, the claim is broad enough because the shape of the keys are not claimed; rather the broad interpretation of the claim is that the location of keys having a negative angle and positive angle with respect the vertical reference line. Such limitation is fairly taught by fig 6 of Horie.

As to claim 64, by comparing figure 2 of the present invention and figures 3 of Horie; we can see that the rows of the keyboard, which includes the alphabet letters, are 3 in both figures.

As claim 68, as can be seen in figure 213, Horie shows that keys are symmetrically shaped.

As to claim 69, Horie (figure 3) shows that the keys are square shaped. As to claims 75-77, it is inherent in Horie's device to have microprocessor, memory to be connected to the microphone, the display, the speaker and the keyboard. As to claim 78, Horie (figures 3 & 6) shows telephone, which fairly reads on the cited limitations of the claim.

Art Unit: 2629

As to claim 79, Horie (figure 4) teaches an antenna (4a) to act as a transmitter and receiver.

As to claim 80, Hughes teaches using RF communication (radio)(see figure 11-14; page 20, lines 33-37 and page 21, line 1).

As to claim 81, Horie teaches wireless voice network and wireless data network (inherent in a mobile phone).

As to claim 82, the choice of GSM voice network and data network GPRS is simply well known in the art and would be inherent in mobile phones.

As to claim 83, Hughes teaches storing user information in a memory(322, 324)(see figures 14 and page 18, lines 3-22).

As to claim 85, Horie shows that the speaker, the display, the keyboard and the microphone are mounted within the front surface *of* the device housing (figures 6).

As to claim 86, the claim is broad enough to read on figure 6 of Horie reference. As to claims 91-93, as can be seen in figures 1 and 2, Horie shows that the housing is formed using two housing (bottom and top in figure 6), and wherein the two housing sections include a plurality of fasteners (where the two sections are connected), and a single circuit board (the bottom section where all the part of the phone in figure 4 is located).

As to claims 94-97, these claims simply shows that the device can be used as personal information manger that includes calendar, data items, appointment, etc. These limitations are described in both Hori and Hughes. For example, Hughes shows

Art Unit: 2629

that the device can be used as a personal purchase or finance manager or PC/MIA, which is used to enter data, which fairly reads on the claimed limitations (see figures 13-16; abstract; page 3, lines 18-37; page 4, lines 1-21 and page 25, lines 18-27).

7. Claims 53-55 and 60-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie (US Patent NO. 6,731,227) in view of Hughes et al (WO 96/04618) and Lookofsky (5,416,730).

As to claims 53-55 and 60-63, Horie as modified fails to point out the QWERTY keyboard having a NUM Lock, a CAP lock and function keys.

Lookofsky teaches a QWERTY keyboard arrangement having a CAP lock, and function keys (see figures 5-6 and column 6, lines 52-58) and keys are oblong, oval or rectangular shaped (see column 6, lines 19-21). It would have been obvious to have modified Horie as modified with the teaching of Lookofsky, since Horie and Lookofsky both teach a keyboard is a QWERTY keyboard and it would have been well known that the QWERTY keyboard having a NUM lock, a CAP lock and function keys, so as to provide a dual function keys and the shape of a key could be changed since changing the shape of a key would not effect the function of a key.

8. Claims 71 and 98-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie and Hughes in view of Aldridge et al. (US patent NO. 6,047,047; hereinafter referred to as Aldridge).

As can be seen above, Horie teaches all the limitation of claim 71 except the citation of serial port. However, Aldridge (figure 1) teaches a handheld device (30) which includes a serial port (30) (col. 4, lines 28-42).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a serial port to Horie's device so as to facilitate the communication to other devices and therefore, increase the versatilities of the device.

As to claims 98-103, the claims disclose serial port that can connect the device to a host compute, and to load encryption key from the host computer. Examiner takes an official notice that these limitations re well known in the art of cellular phone which can be connected to display host via serial port, and wherein encrypted key can be loaded to the device.

9. Claims 65-67, 70, 72-74 and 87-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie and Hughes et al in view of Grant (US patent NO. 5,500,643 provided by the Applicant).

As to claims 65-67, as can be seen above, Horie and Hughes teach all the limitations of claims 65-67 except the citation of having the keys configured along an arc across the front surface of the device housing.

However, Grant (FIGS. 1-2) shows an input device (10) wherein the keys are configured along an arc across the front surface, and shaped and convex or concave. Therefor, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Grant having the keys configured in a arc

Art Unit: 2629

shape to be included in Horie's device so as motivated by Grant, to eliminate ulnar-deviation of the actuating hand (abstract).

As to claim 70, as can be seen in figure 1, of Grant's device shows that the keys having circular shape.

As to claims 72-73, as can be seen in figure 1, Grant shows an auxiliary input/output (46) as a thumbwheel (col. 3, lines 64-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Grant having a thumbwheel to Horie's device so as to simplify inputting data.

As to claim 74, the LED input/output is broad enough that the LED would have been part of the input/output device which as well known to be existed in the QWERTY keyboard.

As to claims 87-88, directed to thumbwheel, which as can be seen above, taught by Grant. Having the thumbwheel in the side or front surface would be obvious to a person of ordinary skill in the art, based on the design of the device and the required characteristics.

10. Claim 89 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horie and Hughes in view of Cairns (US patent NO. 5,930,703).

As can be seen above, Horie teaches all the limitations of claim 89 except the citation of having infrared data port for wireless transmitting and receiving data with another mobile communication device.

However, Cairns (figure 4) teaches a cellular phone for communicating with other similar cellular phone using infrared wireless communication (col. 6, lines 47-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use infrared wireless communication in Horie's phone, because wireless communication uses many types of communication technology such as radio, acoustic oriented based on the design choice. Furthermore, infrared is known for its affordability and reliability.

11. Claim 90 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horie and Hughes in view of Jarrad (US patent NO. 6,047,197).

As can be seen above, Horie teaches all the limitation of claim 90 except the citation of having a mode key to switch the device between the operation modes.

However, Jarrad a phone device that includes a key mode for changing between the modes (col. 3, lines 41-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Jarrad having a toggle switch to change between modes to be incorporated to Horie's device so as to facilitate the switching between the modes, which make the device user friendly.

Response to Arguments

12. Applicant's arguments with respect to claims 44-45 and 47-103 have been considered but are moot in view of the new ground(s) of rejection.

With respect to the argument of the double patent rejection, Examiner respectfully submits that the argument is not persuasive. Examiner believes that the only difference between the claimed limitations in the current application and the claims of the other patents used in the rejection is the idea of using the device of the previous patents as dual mode device, which is simply equivalent to having a device that can be used as a phone and person digital assistant which is well known in the art, and taught by the cited reference.

Conclusion

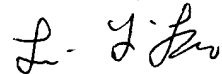
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 25, 2006



Lun-yi Lao
Primary Examiner